

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: October 15, 1999, 00:29:31 ; Search time 29.22 Seconds
(without alignments)
255.037 Million cell updates/sec

Title: US-09-185-258-6
Perfect score: 1001
Sequence: 1 EKPLHALLHGRGVCLNEKSY.....GMEYVDGDFQCCHTFDSSNVE 186

Scoring table: BIOSUM62

Searched: 122810 seqs, 40065486 residues

Database : PIR60:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	995	99.4	272	2	A53748	insulin-like growt
2	980	97.9	271	2	JC4584	insulin-like growt
3	968	96.7	271	2	JC4604	insulin-like growt
4	965	96.4	271	2	JC4163	insulin-like growt
5	353	35.3	291	1	JN0064	insulin-like growt
6	346	34.6	266	2	A35037	insulin-like growt
7	344	34.4	291	1	IOH03	insulin-like growt
8	327	32.7	292	2	A3748	insulin-like growt
9	321	32.1	291	2	I48602	insulin-like growt
10	308	30.8	111	2	B45403	insulin-like growt
11	267.5	26.7	240	2	A39842	insulin-like growt
12	252	25.2	238	2	I48605	insulin-like growt
13	242.5	24.2	226	2	JN0464	insulin-like growt
14	242	24.2	258	2	A43403	insulin-like growt
15	238	23.8	237	2	I47031	insulin-like growt
16	237	23.7	258	2	G01662	insulin-like growt
17	237	23.7	258	2	B37252	insulin-like growt
18	225	22.5	254	2	I48599	insulin-like growt
19	225	22.5	254	2	I48603	insulin-like growt
20	225	22.5	254	2	JC4464	insulin-like growt
21	201	20.1	310	2	A60967	insulin-like growt
22	195.5	19.5	272	2	I48600	insulin-like growt
23	192	19.2	317	2	I45916	insulin-like growt
24	184.5	18.4	272	2	A35082	insulin-like growt
25	179.5	17.9	304	2	A32274	insulin-like growt
26	179	17.9	328	1	A41927	insulin-like growt
27	177	17.7	259	1	IOH01	insulin-like growt
28	173.5	17.3	122	2	T01404	insulin-like growt
29	173	17.3	263	2	S23009	insulin-like growt
30	172	17.2	305	2	I48601	insulin-like growt
31	171	17.1	305	2	JN0508	insulin-like growt
32	164.5	16.4	122	2	C45403	insulin-like growt
33	122	12.2	439	2	S33293	testican - human
34	110	11.0	2767	1	UIHU	thyroglobulin prec
35	107	10.7	1247	1	MEHND	nirogen precursor
36	102	10.2	492	2	A28616	M5 protein precurs
37	98.5	9.8	212	2	I46176	thyroglobulin prec
38	98.5	9.8	314	2	A46489	pan-epithelial gly
39	97	9.7	1376	2	G00043	Osteonidogen - hum

40 96.5 9.6 2769 1 UIBO
41 93.5 9.3 243 2 A36124
42 93 9.3 1245 1 MMNSND
43 91.5 9.1 483 2 A26297
44 91.5 9.1 407 2 S23325
45 91 9.1 402 2 S37046
thyroglobulin prec
thyroglobulin 2 pr
nirogen precursor
M5 protein - strep
M2 protein precurs
IgA receptor - Str

ALIGNMENTS

RESULT 1
A53748
insulin-like growth factor-binding protein 5 precursor - human
N:Alternate names: IGFBP-5
C:Species: Homo sapiens (man)
C>Date: 06-Jan-1995 #sequence-revision 31-Dec-1995 #text_change 20-Mar-1998
C:Accession: A53748; B40403; JH0391; PH0143
R:Allander, S.V.; Larsson, C.; Ehrenborg, E.; Suwanichkul, A.; Weber, G.; Morris, S.L
J. Biol. Chem. 269, 10891-10898, 1994
A:Title: Characterization of the chromosomal gene and promoter for human insulin-like
A:Reference number: A53748; MUID:94193798
A:Accession: A53748
A:Molecule type: DNA
A:Residues: 1-272 <AL>
A:Cross-references: GB:L27556; GB:L27557; GB:L27558; GB:L27559; NID:9452057; PID:9505
R:Shimazaki, S.; Shimonaka, M.; Zhang, H.P.; Ling, N.
J. Biol. Chem. 266, 10646-10653, 1991
A:Title: Identification of five different insulin-like growth factor binding proteins
A:Reference number: A40403; MUID:91244847
A:Accession: B40403
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-272 <SH>
A:Cross-references: GB:M62782; NID:9184817; PID:9184818
A:Experimental source: placenta
R:Kiefer, M.C.; Ioh, K.S.; Bauer, D.M.; Zapf, J.
Biochem. Biophys. Res. Commun. 176, 219-225, 1991
A:Title: Molecular cloning of a new human insulin-like growth factor binding protein.
A:Reference number: JH0391; MUID:91207395
A:Accession: JH0391
A:Molecule type: mRNA
A:Residues: 1-272 <KIE>
A:Cross-references: GB:M65062; NID:9184819; PID:9184820
A:Experimental source: osteosarcoma
R:Andress, D.L.; Birnbaum, R.S.
Biochem. Biophys. Res. Commun. 176, 213-218, 1991
A:Title: A novel human insulin-like growth factor binding protein secreted by osteobl
A:Reference number: PH0143; MUID:91207395
A:Accession: PH0143
A:Molecule type: protein
A:Residues: 24-37, 'X', 39-41, 'X', 43 <AND>
A:Experimental source: cell line V-2
C:Comment: insulin-like growth factors occur in serum and other biological fluids com
C:Genetics:
A:Gene: GDB:IGFBP5
A:Cross-references: GDB:L26837
A:Map position: 17q12.1/q21
C:Superfamily: thyroglobulin type I repeat homology
F:1-23/Domain: signal sequence #status predicted <SIG>
F:24-272/Product: insulin-like growth factor-binding protein 5 #status predicted <IGF
F:192-263/Domain: thyroglobulin type I repeat homology <THV1>

Query Match 99.4%; Score 995; DB 2; Length 272;
Best Local Similarity 99.5%; Pred. No. 1.1e-76;
Matches 185; Conservative 0; Mismatches 1; Indels 0; Gaps 0:
QY 1 EKPLHALLHGRGVCLNEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKTRISE 60
DB 87 EKPLHALLHGRGVCLNEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKTRISE 146
ZY 61 LKAEEAVKDRFPKLVQSFVGGAEATAIPRIISEPEMQESEQGQPCRRHMEASLQELKAS 120

Db 147 LKAEAVKDRKKLTKQSFVGAENAHPRISAPENRQSEOGPCRRHMEASLQELKAS 206
 QY 121 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 180
 Db 207 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 266
 QY 181 DSSNVE 186
 Db 267 DSSNVE 272

RESULT 2

JC4584
 Insulin-like growth factor binding protein-5 precursor - pig
 C:Species: Sus scrofa domestica (domestic pig)
 C>Date: 10-Apr-1996 #sequence_revision 24-May-1996 #text_change 13-Nov-1998
 C:Accession: JC4584; G23734
 R:White, M.E.; Diao, R.; Hathaway, M.R.; Mickelson, J.; Dayton, W.R.
 Biochem. Biophys. Res. Commun. 218, 248-253, 1996
 A:Title: Molecular cloning and sequence analysis of the porcine insulin-like growth factor
 A:Reference number: JC4584; MUID:96136309
 A:Accession: JC4584
 A:Molecule type: mRNA
 A:Residues: 1-271 <WHI>
 A:Cross-references: GB:U41340; NID:g1173906; PID:g1173907
 A:Experimental source: skeletal muscle
 R:Shimasaki, S.; Gao, L.; Shimonaka, M.; Ling, N.
 Mol. Endocrinol. 5, 938-948, 1991
 A:Title: Isolation and molecular cloning of insulin-like growth factor-binding protein-6
 A:Reference number: A23734; MUID:92049376
 A:Accession: G23734
 A:Molecule type: protein
 A:Residues: 20-25,'X',27-28,'X',30-36,'X',38-39 <SHI>
 C:Comment: This protein has essential roles in the regulation and coordination of insulin
 lays a role during myoblast proliferation and differentiation, and is important in the
 C:Keywords: differentiation; growth factor; skeletal muscle
 F:1-19/Domain: signal sequence #status predicted <SIG>
 F:20-271/Product: insulin-like growth factor binding protein-5 #status experimental <MAI>
 F:191-262/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 97.9%; Score 980; DB 2; Length 271;
 Best Local Similarity 97.3%; Pred. No. 1.9e-75;
 Matches 181; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 EKPLHALLHGRGVCLEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKHTRISE 60
 Db 86 EKPLHALLHGRGVCLEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKHTRISE 145
 QY 61 LKAEAVKDRKKLTKQSFVGAENAHPRISAPENRQSEOGPCRRHMEASLQELKAS 120
 Db 146 LKAEAVKDRKKLTKQSFVGAENAHPRISAPENRQSEOGPCRRHMEASLQELKAS 205
 QY 121 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 180
 Db 206 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 265
 QY 181 DSSNVE 186
 Db 266 DSSNVE 271

RESULT 3

JC4804
 Insulin-like growth factor binding protein 5 precursor - mouse
 C:Species: Mus musculus (house mouse)
 C>Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 17-Mar-1999
 C:Accession: I48604; A48699; A54259
 R:Schuller, A.G.; Groffen, C.; van Neck, J.W.; Zwarthoff, E.C.; Drop, S.L.
 Mol. Cell. Endocrinol. 104, 57-66, 1994
 A:Title: cDNA cloning and mRNA expression of the six mouse insulin-like growth factor bf

A:Reference number: I48600; MUID:95121750
 A:Accession: I48604
 A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: mRNA
 A:Residues: 1-271 <RES>
 A:Cross-references: EMBL:X81583; NID:g550384; PID:g550385
 R:James, P.L.; Jones, S.B.; Busby Jr., W.H.; Clemmons, D.R.; Rotwein, P.
 J. Biol. Chem. 268, 22305-22312, 1993
 A:Title: A highly conserved insulin-like growth factor-binding protein (IGFBP-5) is e
 A:Reference number: A48699; MUID:94042976
 A:Accession: A48699
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-271 <JAM>
 A:Cross-references: GB:I12447; NID:g425405; PID:g293384
 R:Kou, K.; Jenkins, N.A.; Gilbert, D.J.; Copeland, N.G.; Rotwein, P.
 Genomics 20, 412-418, 1994
 A:Title: Organization, expression, and chromosomal location of the mouse insulin-like
 A:Reference number: A54259; MUID:94307727
 A:Accession: A54259
 A:Molecule type: DNA
 A:Residues: 1-111 <KOU>
 A:Cross-references: GB:U02023
 C:Genetics:
 A:Gene: IGFBP-5
 C:Superfamily: thyroglobulin type I repeat homology
 F:191-262/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 96.7%; Score 968; DB 2; Length 271;
 Best Local Similarity 95.7%; Pred. No. 2e-74;
 Matches 178; Conservative 2; Mismatches 6; Indels 0; Gaps 0;

QY 1 EKPLHALLHGRGVCLEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKHTRISE 60
 Db 86 EKPLHALLHGRGVCLEKSYREQVKIERDSREHEPTTSEMAEETYSKIFRPKHTRISE 145
 QY 61 LKAEAVKDRKKLTKQSFVGAENAHPRISAPENRQSEOGPCRRHMEASLQELKAS 120
 Db 146 LKAEAVKDRKKLTKQSFVGAENAHPRISAPENRQSEOGPCRRHMEASLQELKAS 205
 QY 121 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 180
 Db 206 PRMVPRAVLPNCDRKGFKYKQCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFQCHTF 265
 QY 181 DSSNVE 186
 Db 266 DSSNVE 271

RESULT 4

JC1463
 Insulin-like growth factor-binding protein 5 precursor - rat
 C:Species: Rattus norvegicus (Norway rat)
 C>Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 10-Sep-1997
 C:Accession: JC1463; A40403; F40403
 R:Zhu, X.; Ling, N.; Shimasaki, S.
 Biochem. Biophys. Res. Commun. 190, 1045-1052, 1993
 A:Title: Cloning of the rat insulin-like growth factor binding protein-5 gene and DN
 A:Reference number: JC1463; MUID:93176146
 A:Accession: JC1463
 A:Molecule type: DNA
 A:Residues: 1-271 <ZHU>
 A:Cross-references: GB:I08275
 R:Shimasaki, S.; Shimonaka, M.; Zhang, H.P.; Ling, N.
 J. Biol. Chem. 266, 10646-10653, 1991
 A:Title: Identification of five different insulin-like growth factor binding proteins
 A:Reference number: A40403; MUID:91244847
 A:Accession: A40403
 A:Molecule type: mRNA
 A:Residues: 1-271 <SHI>
 A:Cross-references: GB:M62781; NID:g204745; PID:g204746
 A:Accession: F40403

A:Status: preliminary
A:Molecule type: protein
A:Residues: 20-25,'X',27-28,'X',30-36,'X',38-43,'X',45-51,'X',53,'XX' <SH2>
C:Genetics:
A:introns: 112/3; 188/3; 228/3
C:Superfamily: thyroglobulin type I repeat homology
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-271/Product: insulin-like growth factor binding protein 5 #status predicted <MAT>
F:191-262/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 96.4%; Score 965; DB 2; Length 271;
Best Local Similarity 95.2%; Pred. No. 3.5e-74;
Matches 177; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

QY 1 EKPLHALLHGRVCLNKSREYQVKKRCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFCHTF 60
|||||
Db 86 EKPLHALLHGRVCLNKSREYQVKKRCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFCHTF 145
|||||

QY 61 LKAEAVKDRKKLTQSFVGGAEHTAPRIISEPEMRQESQGGPCRRHMEASLQELKAS 120
|||||
Db 146 LKAEAVKDRKKLTQSFVGGAEHTAPRIISEPEMRQESQGGPCRRHMEASLQELKAS 205
|||||

QY 121 PRMVPRAVYLPCNDRKGYKRRCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFCHTF 180
|||||
Db 206 PRMVPRAVYLPCNDRKGYKRRCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFCHTF 265
|||||

QY 181 DSSNVE 186
|||||
Db 266 DSSNVE 271

RESULT 5
JN0064
insulin-like growth factor-binding protein 3 precursor - bovine
C:Species: Bos primigenius taurus (Cattle)
C:Date: 21-Nov-1993 #sequence_revision 05-Apr-1995 #text_change 05-Sep-1997
C:Accession: JN0064; A37403
Biochem. Biophys. Res. Commun. 177, 1025-1032, 1991
A:Title: Cloning and characterization of bovine insulin-like growth factor binding protein
A:Reference number: JN0064; MUID:91282738
A:Accession: JN0064
A:Molecule type: mRNA
A:Residues: 1-291 <SPR>
A:Cross-references: GB:M76478; NID:g163189; PID:g163190
A:Experimental source: liver
R:Conover, C.A.; Ronk, M.; Lombana, F.; Powell, D.R.
Endocrinology 127, 2795-2803, 1990
A:Title: Structural and biological characterization of bovine insulin-like growth factor
A:Reference number: A37403; MUID:91065246
A:Accession: A37403
A:Molecule type: protein
A:Residues: 28-52 <CON>
C:Genetics:
A:Gene: IGFBP-3
C:Superfamily: insulin-like growth factor binding protein 1; thyroglobulin type I repeat
C:Keywords: glycoprotein
F:1-27/Domain: signal sequence #status predicted <SIG>
F:28-291/Product: insulin-like growth factor-binding protein 3 #status predicted <MAT>
F:213-285/Domain: thyroglobulin type I repeat homology <THY1>
F:118,136,199/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 35.3%; Score 353; DB 1; Length 291;
Best Local Similarity 37.6%; Pred. No. 9.3e-23;
Matches 73; Conservative 28; Mismatches 73; Indels 20; Gaps 4;

QY 2 KPLHALLHGRVCLNKSREYQVKKRCKPSRGRKRGICWCVDKYGKMLPGMEYVDGDFCHTF 51
|||||
Db 104 KPLQALLDGRGLCANASAVGRILPYLLPSASGNGSESEEDHSMGNTENQAGSPSTRVPS 163
|||||

QY 51 -FRPKHTRISELKAEAVKDRKKLTQSFVGGAEHTAPRIISEPEMRQESQGGPCRRH 109

Db 164 KFHPIHTKMDVIKKGHAQDSORVKVDYESQSTDPQNES-----SESKRETEYGPGRRE 216
|||||

QY 110 MEASLQELKASPRMVPRAVYLPCNDRKGYKRRCKPSRGRKRGICWCVDKYGKMLPGME 169
|||||

Db 217 MEDTLNHLKFLNMLSPRGTHIPNCDDKKGKGYKRRCKPSRGRKRGICWCVDKYGKMLPGFD 276
|||||

QY 170 YV-DGDFQCHTFDS 182
|||||

Db 277 VKGKGDVHCYSMES 290

RESULT 6
A35037
insulin-like growth factor-binding protein 3 homolog - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 20-Jul-1990 #sequence_revision 20-Jul-1990 #text_change 01-Dec-1995
C:Accession: A35037
R:Shimasaki, S.; Shimonaka, M.; Qi, M.; Inouye, S.; Shibata, F.; Ling, N.
J. Biol. Chem. 265, 2198-2202, 1990
A:Title: Structural characterization of a follicle-stimulating hormone action inhibit
A:Reference number: A35037; MUID:90130475
A:Accession: A35037
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-266 <SH1>
A:Cross-references: GB:J05228
C:Superfamily: insulin-like growth factor binding protein 1; thyroglobulin type I rep
F:188-260/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 34.6%; Score 346; DB 2; Length 266;
Best Local Similarity 37.7%; Pred. No. 3.3e-22;
Matches 72; Conservative 32; Mismatches 75; Indels 12; Gaps 4;

QY 2 KPLHALLHGRVCLNKS-----YREQVKIERDSREHEPTTISEMAETYSPIKIFRPK 54
|||||

Db 77 RPLQALLDGRGLCANASAGRLRAYLLPAPPAPGNGSESEEDRSVDNENQALPSTRVP 136
|||||

QY 55 HTRISEL--KAEAVKDRKKLTQSFVGGAEHTAPRIISEPEMRQESQGGPCRRHMEA 112
|||||

Db 137 DSLHSHVHTKMDVIKKGHAQDSORVKVDYESQSTDPQNES--ESKRETEYGPGRREMD 194
|||||

QY 113 LQELKASPRMVPRAVYLPCNDRKGYKRRCKPSRGRKRGICWCVDKYGKMLPGMEYV- 172
|||||

Db 195 TLNHLKFLNMLSPRGTHIPNCDDKKGKGYKRRCKPSRGRKRGICWCVDKYGKMLPGFDVK 254
|||||

QY 172 DGDFQCHTFDS 182
|||||

Db 255 KGDVHCYSMES 265

RESULT 7
IOH03
insulin-like growth factor-binding protein 3 precursor - human
N:Alternate names: insulin-like growth factor 53K binding protein
C:Species: Homo sapiens (man)
C:Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 24-Oct-1997
C:Accession: A36578; A34940; A61038; B35803; B54651; I37622
R:Cubbage, M.L.; Suwanichkul, A.; Powell, D.R.
J. Biol. Chem. 265, 12642-12649, 1990
A:Title: Insulin-like growth factor binding protein-3. Organization of the human chro
A:Reference number: A36578; MUID:90324259
A:Accession: A36578
A:Molecule type: DNA
A:Residues: 1-291 <CUB>
A:Cross-references: GB:M35878; GB:J05537; NID:g184522; PID:g386791
R:Wood, W.I.; Cachianes, G.; Henzel, W.J.; Winslow, G.A.; Spencer, S.A.; Hellmiss, R.
Mol. Endocrinol. 2, 1176-1185, 1988
A:Title: Cloning and expression of the growth hormone-dependent insulin-like growth f
A:Reference number: A34940; MUID:89112197
A:Accession: A34940
A:Molecule type: mRNA

A:Residues: 1-291 <WOO>
A:Cross-references: GB:M35878; NID:gl84522; PID:g396791
A:Note: part of this sequence, including the amino end of the mature protein, was confir
R:Spratt, S.K.; Tatsuno, G.P.; Yamataka, M.K.; Ark, B.C.; Detmer, J.; Mascarenhas, D.; F
Growth Factors 3, 63-72, 1990
A:Title: Cloning and expression of human insulin-like growth factor binding protein 3.
A:Reference number: A61038; MUID:90344267
A:Accession: A61038
A:Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-31, 'A', '33-291 <SPR>
R:Zapf, J.; Kiefer, M.; Merryweather, J.; Masiaz, F.; Bauer, D.; Born, W.; Fischer, J.A
J. Biol. Chem. 265, 14892-14898, 1990
A:Title: Isolation from adult human serum of four insulin-like growth factor (IGF) bindi
ic tumor hypoglycemia.
A:Reference number: A35803; MUID:90368661
A:Accession: B35803
A:Molecule type: protein
A:Residues: 28-59, 'X', '61-63, 'X', '65 <ZAP>
R:Koghan, M.; Segovia, B.; Whitechurch, O.; Binoux, M.
Growth Regul. 1, 125-130, 1991
A:Title: Purification from human cerebrospinal fluid of insulin-like growth factor bindi
A:Reference number: A54651; MUID:93091816
A:Accession: B54651
A:Molecule type: protein
A:Residues: 28-39, 'X', '41-42, 'X', '44-45 <ROG>
A:Experimental source: cerebrospinal fluid
A:Note: sequence extracted from NCBI backbone (NCBIP:121073)
R:Thewatt, R.; Fleischmann, R.; Goldstein, S.
DNA Seq. 4, 43-46, 1993
A:Title: Analysis of the primary structure of insulin-like growth factor binding protein
A:Reference number: I37622; MUID:94146408
A:Accession: I37622
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-291 <RES>
A:Cross-references: EMBL:X64875; NID:g398163; PID:g398164
C:Genetics:
A:Gene: GDB:IGFBP3
A:Cross-references: GDB:136724; OMIM:146732
A:Map position: 7p13-7p12
A:Introns: 135/1; 210/3; 250/3
C:Superfamily: insulin-like growth factor binding protein 1: thyroglobulin type I repeat
C:Keywords: glycoprotein
F:1-27/Domain: signal sequence #status predicted <SIG>
F:28-291/Product: insulin-like growth factor-binding protein 3 #status experimental <MA
F:213-285/Domain: thyroglobulin type I repeat homology <THY1>
F:116/Binding site: carbohydrate (Asn) (covalent) #status experimental
F:136.199/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 34.4%; Score 344; DB 1; Length 291;
Best Local Similarity 38.0%; Pred. No. 5.3e-22;
Matches 76; Conservative 30; Mismatches 64; Indels 30; Gaps 7;

QY 2 KPLALLHGRGVCNLF-----RSY-----RQVKTERDSRCHETPTSEMAEET 45
DB 102 RFOALLDGRGLCVNASVSLRAYLLPAPPAGNASESEDRSAGSVESVSS-THRV 160
QY 46 YSPKIFRPKHTRISELKAEAVKKDRKKLTQSKFVGGAENTAHPRIISEPEMROESOGP 105
DB 161 SDPK-FHPLHSKIILIKKHAKDSQRYKVDYESQSTDTQNFSE-----SESKRETEYGP 212
QY 106 CRHMEASLOELKAEPMVPRAYLPNCDRKGFYKQCKPSPGRKRGICWCVKYMKL 165
DB 213 CRREMEDTLNLKFLNVLSPRGVHIPNCDKGFYKQCKPSPGRKRGICWCVKYM 272
QY 166 PGMEYV---DGDFOCHTFDS 182
DB 273 PG---YTTKGEDVHCYSMQS 290

RESULT 8

A36748
Insulin-like growth factor-binding protein 3 precursor - rat
N:Alternate names: IGF-binding protein
C:Species: Rattus norvegicus (Norway rat)
C:Date: 31-May-1991 #sequence-revision 31-May-1991 #text-change 13-Sep-1998
C:Accession: A36748; A34651; A33570; A30820; B30820; A26832; D40403
R:Shimasaki, S.; Koba, A.; Mercado, M.; Shimonaka, M.; Ling, N.
Biochem. Biophys. Res. Commun. 165, 907-912, 1989
A:Title: Complementary DNA structure of the high molecular weight rat insulin-like gr
A:Reference number: A36748; MUID:90088511
A:Accession: A36748
A:Molecule type: mRNA
A:Residues: 1-292 <SHI>
A:Cross-references: GB:M1837; NID:g204741; PID:g204742
R:Albiston, A.L.; Herington, A.C.
Biochem. Biophys. Res. Commun. 166, 892-897, 1990
A:Title: Cloning and characterization of the growth hormone-dependent insulin-like gr
A:Reference number: A34651; MUID:90147804
A:Accession: A34651
A:Molecule type: mRNA
A:Residues: 1-7, 9-292 <ALB>
A:Cross-references: GB:M33300; NID:g204743; PID:g204744
R:Shimonaka, M.; Schroeder, R.; Shimasaki, S.; Ling, N.
Biochem. Biophys. Res. Commun. 165, 189-195, 1989
A:Title: Identification of a novel binding protein for insulin-like growth factors in
A:Reference number: A33570; MUID:90073708
A:Accession: A33570
A:Molecule type: protein
A:Residues: 28-39, 'X', '41-42, 'X', '44-49 <SH2>
R:Zapf, J.; Born, W.; Chang, J.Y.; James, P.; Froesch, E.R.; Fischer, J.A.
Biochem. Biophys. Res. Commun. 156, 1187-1194, 1988
A:Title: Isolation and NH-2-terminal amino acid sequences of rat serum carrier protei
A:Reference number: A90149; MUID:89050156
A:Accession: A30820
A:Molecule type: protein
A:Residues: 28-50, 'X', '52-55, 'X', '57-58 <ZAP>
A:Note: this sequence was derived from a protein of 42-45K
A:Accession: B30820
A:Molecule type: protein
A:Residues: 28-55, 'X', '57-59, 'X', '61-68 <ZAP>
A:Note: this sequence was derived from a protein of 30-32K
R:Baxter, R.C.; Martin, J.L.
Biochem. Biophys. Res. Commun. 147, 408-415, 1987
A:Title: Binding proteins for insulin-like growth factors in adult rat serum. Compari
A:Reference number: A26832; MUID:87326380
A:Accession: A26832
A:Molecule type: protein
A:Residues: 28-42 <BAX>
R:Shimasaki, S.; Shimonaka, M.; Zhang, H.P.; Ling, N.
J. Biol. Chem. 266, 10646-10653, 1991
A:Title: Identification of five different insulin-like growth factor binding proteins
A:Accession: D40403
A:Status: preliminary
A:Molecule type: protein
A:Residues: 28-39, 'X', '41-42, 'X', '44-47, 188-197 <SH3>
C:Superfamily: insulin-like growth factor binding protein 1; thyroglobulin type I rep
C:Keywords: glycoprotein; plasma
F:1-27/Domain: signal sequence #status predicted <SIG>
F:214-286/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 32.7%; Score 327; DB 2; Length 292;
Best Local Similarity 37.8%; Pred. No. 1.4e-20;
Matches 68; Conservative 26; Mismatches 66; Indels 20; Gaps 3;

QY 3 PLHALLHGRGVCNLF-----KSYEQVKIERDSRCHETPTSEMAEETYSKPI----- 51
DB 105 PLKALLNGRGFCANASASNLISAYLPSPGNTTSESDHNAGSVESOVSTHRVTOS 164
QY 51 -FRPKHTRISELKAEAVKKDRKKLTQSKFVGGAENTAHPRIISEPEMROESOGP 109
DB 165 KFHPLHSKMEVIKGOARDSQRYKVDYESQSTDTQNFSE-----SESKRETEYGPCRE 217

QY 110 MEASLOELKASPRMVPRVAVLPNCGRKGFYKRRKCKPSGRKRGICWCVDKYGMKLPQME 169
 Db 218 MEDTLNLKFLNLVSPRGVHPNCDKKGFGYKKCKRPSKGRKRGFCWCVDKYGMKLPQGYD 277

RESULT 9
 I48602
 insulin-like growth factor binding protein-3 - mouse
 C:Species: Mus musculus (house mouse)
 C>Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 10-Oct-1997
 C:Accession: I48602
 R:Schuller, A.G.; Groffen, C.; van Neck, J.W.; Zwartthoff, E.C.; Drop, S.L.
 Mol. Cell. Endocrinol. 104, 57-66, 1994
 A:Title: cDNA cloning and mRNA expression of the six mouse insulin-like growth factor b
 A:Reference number: I48602
 A:Accession: I48602
 A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: mRNA
 A:Residues: 1-291 <RES>
 A:Cross-references: EMBL:X81581; NID:g550380; PID:g550381
 C:Gene: IGFBP-3
 C:Superfamily: insulin-like growth factor binding protein 1; thyroglobulin type I repeat
 F:213-285/Domain: thyroglobulin type I repeat homology <THY1>

Query Match 32.1%; Score 321; DB 2; Length 291;
 Best Local Similarity 36.7%; Pred. No. 4.5e-20;
 Matches 66; Conservative 27; Mismatches 67; Indels 20; Gaps 3;

QY 3 PLHALLHGRGVCLNE-----KSYREOVKIERDSREHEPTTSEMAETYSFKI----- 51
 Db 104 PLRALLNGRGFCANASAGSLSTYLPQAPCNISEEHNAGSVQVVPSTHRVIDS 163

QY 51 -FRPKHTRISELKAENVKDKRKLTKQSKFVGGAENTAHPRIISEPEMRQSEQGPCRRH 109
 Db 164 KFHPLHAKMDVIRKGHARDSDQYVDVESQSTDTDNFS-----SESKRETEYGPCRRE 216

QY 110 MEASLOELKASPRMVPRVAVLPNCGRKGFYKRRKCKPSGRKRGICWCVDKYGMKLPQME 169
 Db 217 MEDTLNLKFLNLVSPRGVHPNCDKKGFGYKKCKRPSKGRKRGFCWCVDKYGMKLPQGYD 276

RESULT 10
 B45403
 insulin-like growth factor-binding protein 5 - bovine (fragment)
 C:Species: Bos primigenius taurus (cattle)
 C>Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 29-Jan-1999
 C:Accession: B45403
 R:Moser, D.R.; Lowe Jr., W.L.; Dake, B.L.; Booth, B.A.; Boes, M.; Clemmons, D.R.; Bar...
 Mol. Endocrinol. 6, 1805-1814, 1992
 A:Title: Endothelial cells express insulin-like growth factor-binding proteins 2 to 6.
 A:Reference number: A45403; MUID:93125553
 A:Accession: B45403
 A:Status: preliminary; not compared with conceptual translation
 A:Molecule type: nucleic acid
 A:Residues: 1-111 <POS>
 A:Cross-references: GB:S52657; NID:g263305; PID:g263306
 A:Experimental source: endothelial cells
 A:Note: sequence extracted from NCBI backbone (NCBIP:122190)

Query Match 30.8%; Score 308; DB 2; Length 111;
 Best Local Similarity 98.3%; Pred. No. 1.9e-19;
 Matches 58; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 EKPLHALLHGRGVCLNEKSYREOVKIERDSREHEPTTSEMAETYSFKIFRPKPTRIS 59
 Db 53 EKPLHALLHGRGVCLNEKSYREOVKIERDSREHEPTTSEMAETYSFKIFRPKPTRIS 111

RESULT 11

A39842
 insulin-like growth factor-binding protein 6 precursor - human
 N:Alternate names: IGFBP-6; insulin-like growth factor II-binding protein
 C:Species: Homo sapiens (man)
 C>Date: 20-Mar-1992 #sequence_revision 31-Dec-1995 #text_change 10-Sep-1997
 C:Accession: A39842; B23734; PH0144; A35470; C35803
 R:Kiefer, M.C.; Masiarz, F.R.; Bauer, D.M.; Zapf, J.
 J. Biol. Chem. 266, 9043-9049, 1991
 A:Title: Identification and molecular cloning of two new 30-kDa insulin-like growth f
 A:Reference number: A39842; MUID:91225006
 A:Accession: A39842
 A:Molecule type: mRNA
 A:Residues: 1-240 <KIE>
 A:Cross-references: GB:M62402; NID:g184813; PID:g184814
 R:Shimasaki, S.; Gao, L.; Shimomura, M.; Ling, N.
 Mol. Endocrinol. 5, 938-948, 1991
 A:Title: Isolation and molecular cloning of insulin-like growth factor-binding protei
 A:Reference number: A23734; MUID:92049376
 A:Accession: B23734
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-240 <SHI>
 A:Cross-references: GB:M69054; NID:g183893; PID:g183894
 R:Andress, D.L.; Birnbaum, R.S. 176, 213-218, 1991
 Biochem. Biophys. Res. Commun. 176, 213-218, 1991
 A:Title: A novel human insulin-like growth factor binding protein secreted by osteob
 A:Reference number: PH0143; MUID:91207395
 A:Accession: PH0144
 A:Molecule type: protein
 A:Residues: 1-30-31, 'P', 33-39, 'X', 41-42 <AND>
 A:Experimental source: cell line V-2
 R:Martin, J.L.; Willetts, K.E.; Baxter, R.C.
 J. Biol. Chem. 265, 4124-4130, 1990
 A:Title: Purification and properties of a novel insulin-like growth factor-II binding
 A:Reference number: A35470; MUID:90154107
 A:Accession: A35470
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 28, 'A', 30-39 <MAR>
 R:Zapf, J.; Kiefer, M.; Merryweather, J.; Masiarz, F.; Bauer, D.; Born, W.; Fischer,
 J. Biol. Chem. 265, 14892-14898, 1990
 A:Title: Isolation from adult human serum of four insulin-like growth factor (IGF) bi
 ic tumor hypoglycemia.
 A:Reference number: A35803; MUID:90368661
 A:Accession: C35803
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 'AA', 30-31, 'H', 33-54, 'QXG' <ZAP>
 C:Genetics:
 A:Gene: GDB:IGFBP6
 A:Cross-references: GDB:127456; OMIM:146735
 A:Map position: 12pter-12qter
 C:Superfamily: thyroglobulin type I repeat homology
 C:Keywords: glycoprotein
 F:1-27/Domain: signal sequence #status predicted <SIG>
 F:28-240/Product: insulin-like growth factor-binding protein 6 #status predicted <MAT
 F:163-234/Domain: thyroglobulin type I repeat homology <THY1>
 F:229/Binding site: carbohydrate (Asn) #status predicted

Query Match 26.7%; Score 267.5; DB 2; Length 240;
 Best Local Similarity 32.4%; Pred. No. 1.1e-15;
 Matches 59; Conservative 31; Mismatches 59; Indels 33; Gaps 4;

QY 1 EKPLHALLHGRGVCLNEKSYREOVKIERDSREHEPTTSEMAETYSFKIFRPKPTRIS 60
 Db 91 EAPLRALLHGRGVCLNPARA-----PAVAEE--NPRESKP----- 123

QY 61 LKAEAVKDKRKLTKQSKFVGGAENTAHPRIISEPEMRQSEQGPCRRHMSLOELKAS 120
 Db 123 -QAGTARPODVNRDQQRNPSTTPSQPSAGV----QDTEMGPCRRHLDVLOQLQTE 177

QY 121 PRMVPRVAVLPNCGRKGFYKRRKCKPSGRKRGICWCVDKYGMKLPQGYDFOCHTF 180

